

Hebridean
Whale &
Dolphin
Trust

Floating Classroom

SESSION BREAKDOWN

Safety briefing - Prior to boarding. Each pupil will get a lifejacket.

Welcome and Introduction - Introducing Silurian and the role of volunteers in the science.
- (SCN 2-20a)

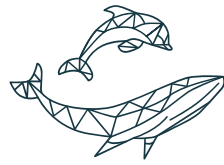
Explore Silurian - Pupils look around the boat, build confidence and learn new terminology.

Species Identification - Discussion about the whales and dolphins found locally
- (SCN 2-01a, SCN 1-02a, SCN 1-12a, SOC 0-08a)

Visual Surveying - Practical - how to watch for whales and dolphins from the mast
- (MNU 1-01a, MNU 2-01a, MTH 1-17a, MTH 2-17c)

Acoustic Surveying - PowerPoint - How we listen for dolphins and porpoises using our hydrophone
- (SCN 2-11a, SOC 2-08a, SOC 2-09a)

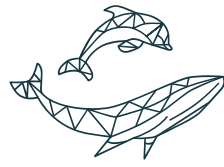
Writing the Blog - A chance for pupils to give feedback.



Floating Classroom - Curriculum Links

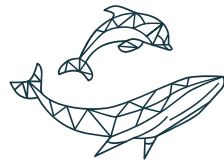
CURRICULUM FOR EXCELLENCE - MATHS

	OUTCOME	SESSION LINKS
ESTIMATION & ROUNDING	<p>I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate. MNU 1-01a</p> <p>I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others. MNU 2-01a</p>	<p>Practical activity in which pupils estimate the distance of objects from the bow of the boat.</p> <p>Use of known distances to help estimate the distance of objects from the bow.</p> <p>Use of a range finder to find the actual distance of objects from the bow to then compare with estimated distances.</p>
ANGLE, SYMMETRY & TRANSFORMATION	<p>I can describe, follow and record routes and journeys using signs, words and angles associated with direction and turning. MTH 1-17a</p> <p>Through practical activities which include the use of technology, I have developed my understanding of the link between compass points and angles and can describe, follow and record directions, routes and journeys using appropriate vocabulary. MTH 2-17c</p>	<p>Basic understanding of relative bearings. The bow of the ship as 0 degrees, mid ships 90 and 270 degrees and behind the ship 180 degrees.</p> <p>Understanding of the use of a bearing to describe the angle of an object/sighting in relation to the boat.</p> <p>Discussion about how these angles are used on board to record the location of dolphin sightings.</p> <p>Practical activity with pupils estimating the angle/ bearing of objects in water i.e. boats/birds.</p>



CURRICULUM FOR EXCELLENCE - SCIENCE

	OUTCOME	SESSION LINKS
BIODIVERSITY & INTER-DEPENDENCE	<p>I can identify and classify examples of living things, past and present, to help me appreciate their diversity.</p> <p>I can relate physical and behavioural characteristics to their survival or extinction. SCN 2-01a</p> <p>I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food. SCN 1-02a</p>	<p>Classification – mammals vs fish</p> <p>Identification of frequently seen species of whales, dolphins, porpoises and sharks on the west coast.</p> <p>Appreciation of the diversity of cetaceans on the west coast – 24 species recorded (one quarter of those found worldwide).</p> <p>Discussion about characteristics key to some species survival. – Scottish bottlenose dolphins are the largest in the world, to enable them to survive cold water.</p> <p>Discussion about cetacean feeding (teeth vs baleen).</p> <p>Cetaceans are carnivores. Discussion about their prey e.g. killer whales eat porpoises.</p>
BODY SYSTEMS & DEPENDENCE	<p>By researching, I can describe the position and function of the skeleton and major organs of the human body and discuss what I need to do to keep them healthy. SCN 1-12a</p>	<p>Handling of dolphin / whale teeth and bones.</p> <p>Discussion about the position and function of these bones and teeth.</p> <p>Comparisons between whales and humans (we are both mammals).</p>
TOPICAL SCIENCE	<p>Through research and discussion I have an appreciation of the contribution that individuals are making to scientific discovery and invention and the impact this has made on society. SCN 2-20a</p>	<p>Understanding that the data collected on board is recorded thanks to hundreds of volunteers. Everyday people who come on holiday, train up and help the charity.</p> <p>Discussion about the importance of this long term data to protect whales and dolphins on the west coast.</p>



VIBRATIONS & WAVES	<p>Through research on how animals communicate, I can explain how sound vibrations are carried by waves through air, water and other media. SCN 2-11a</p>	<p>Listen to sounds both biological and man-made recorded underwater on HWDT's hydrophone (underwater microphone).</p> <p>Discussion about dolphin communication – clicks and whistles and echolocation.</p> <p>Handling of dolphin jaw and ear bone to understand the biology behind dolphin communication.</p> <p>Discussion about why they use sound?</p> <p>Comparison of different sounds under water, their pitch and their function, linking to how sound vibrations are carried by waves through water.</p>
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CURRICULUM FOR EXCELLENCE – SOCIAL STUDIES

	OUTCOME	SESSION LINKS
PEOPLE, PLACE & ENVIRONMENT	<p>I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment. SOC 0-08a</p> <p>I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally-responsible way. SOC 2-08a</p> <p>Having explored the ways journeys can be made, I can consider the advantages and disadvantages of different forms of transport, discussing their impact on the environment. SOC 2-09a</p>	<p>Greater understanding of diversity of species found in their local area.</p> <p>Discussion around noise as a form of pollution. Including some causes of noise pollution due to human activity.</p> <p>Listening to the noise created by ferries and speed boats – having an awareness of the unseen impact of this on the environment.</p> <p>Discussion about what a busy harbour would be like for a dolphin.</p>